



IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF NEW YORK

UNITED STATES OF AMERICA

v.

**CHI LUNG WINSMAN NG, a/k/a
"WINSMAN NG"**

Defendant.

) Criminal No. 1:21-CR-
)
) **Indictment**
)
) Violation: 18 U.S.C. § 1832(a)(5)
) [Conspiracy to Steal Trade
) Secrets]
)
) One Count
)
) Counties of Schenectady, Albany
) Offense:

THE GRAND JURY CHARGES:

At all times relevant to this Indictment:

1. The General Electric Company ("GE") was a publicly-traded corporation whose business focused on providing products and services in the energy, technology, finance, industrial, and consumer products industries. GE maintained its Global Research Center ("GRC") in Niskayuna, New York (located in the Northern District of New York), and controlled office and laboratory / research spaces within the State University of New York's College of Nanoscience and Engineering's ("CNSE") campus in Albany, New York (also located in the Northern District of New York). GE marketed, sold, and distributed its products and services in interstate and foreign commerce.

2. Beginning in about 2014, GE entered into a public-private partnership with the State University of New York's Polytechnic Institute. The partnership was known as the New York Power Electronics Manufacturing Consortium ("NY-PEMC"). NY-PEMC's purpose was to research, develop, design, test, and produce the next generation of semiconductors, specifically, silicon carbide metal-oxide semiconductor field-effect transistors ("MOSFETs"). GE invested

over \$100 million in NY-PEMC. GE's GRC assigned a number of its research engineers to work for NY-PEMC. These GE research engineers have collectively spent thousands of hours researching, developing, designing, testing, and producing silicon carbide MOSFETs (collectively, GE's "Research and Engineering Efforts"), resulting in step-by-step instructions for the manufacture of silicon carbide MOSFETs, detailed process flow for chip fabrication, and a detailed business plan for the development, manufacture, and sale of silicon carbide MOSFETs (collectively, the trade secrets).

3. Silicon carbide MOSFETs are small electronic semiconductors / switches that regulate the flow of electricity through devices. GE's silicon carbide MOSFETs are used in a variety of products built and sold by GE including wind turbines, solar inverters, medical imaging systems, and aviation equipment. Products containing GE's silicon carbide MOSFETs are placed in interstate and foreign commerce.

4. Manufacturing a silicon carbide MOSFET involves approximately 200 steps. These steps are exceptionally complicated.

5. GE's silicon carbide MOSFETs are superior to other silicon-only semiconductors / switches because GE's silicon carbide MOSFETs use less energy and can endure higher temperatures, making them more efficient and durable than traditional silicon-only semiconductors / switches.

6. Because GE's silicon carbide MOSFETs have the capacity to handle higher frequencies and temperatures than traditional silicon MOSFETs, devices that contain GE's silicon carbide MOSFETs can operate with smaller cooling systems, resulting in space, weight, and energy savings. The unique capabilities of GE's silicon carbide MOSFETs give GE a unique competitive advantage in the MOSFET global market.

7. In light of the sensitivity and value of GE's Research and Engineering Efforts involving silicon carbide MOSFETs, GE considered the results of those efforts to be trade secrets and proprietary information. GE took reasonable measures to protect and keep the Research and Engineering Efforts secret, including numerous physical and data security measures. These measures included:

- a. Employing perimeter security at CNSE to prevent unauthorized persons from entering buildings in which research, design, testing, and manufacturing of GE's silicon carbide MOSFETs was ongoing;
- b. Employing building and room access measures such as card readers to prevent unauthorized persons from entering office spaces and clean rooms;
- c. Requiring visitors to GE's spaces at CNSE to be badged and escorted by approved personnel;
- d. Requiring employees to sign an "Employee Innovation and Proprietary Information Agreement" that explains how any innovations, technologies, inventions, etc. that GE employees create while working for GE are the sole property of GE;
- e. Requiring employees to be familiar with, and follow, GE's Acceptable Use of GE Information Resources policies which govern how to protect, safeguard, and use GE information, to include GE's trade secrets; and
- f. Employing computer network access controls that limit access to computer and file servers to those individual employees who have the necessary credentials, and have a legitimate business need to access GE's silicon carbide MOSFET files and materials.

8. The Research and Engineering Efforts involving silicon carbide MOSFETs derived independent economic value, both actual and potential, from not being generally known to, and not being readily ascertainable through proper means by, the public. GE did not license or otherwise make individual silicon carbide MOSFET's created through its Research and Engineering Efforts available for sale to the public or its customers.

9. Defendant **CHI LUNG WINSMAN NG, a/k/a "WINSMAN NG,"** is a citizen of the United Kingdom by virtue of his birth in Hong Kong. **NG** is in his sixties. During the 2015-2018 period of time, **NG** worked as the Vice President of Sales for a Chinese semiconductor company. The Chinese semiconductor company for which **NG** worked sold materials used to build silicon carbide MOSFETs.

10. From approximately October, 2010 through about January, 2018, Co-conspirator #1 was employed by GE as a research engineer at GE's GRC. During the period from about January, 2015 through about January, 2018, Co-conspirator #1 resided in Niskayuna, New York.

11. During Co-conspirator #1's tenure with GE's GRC, he/she was assigned to work for NY-PEMC on silicon carbide MOSFETs, out of GE-controlled spaces inside of the CNSE's campus in Albany, New York. As part of Co-conspirator #1's routine duties at CNSE, he/she had access to GE's Research and Engineering Efforts surrounding silicon carbide MOSFETs.

12. Between about March, 2017 and about January, 2018, Co-conspirator #1 and **NG** developed a business plan to create, and seek funding for, a start-up company that would manufacture and sell silicon carbide MOSFETs using Research and Engineering Efforts trade secrets involving silicon carbide MOSFETs that Co-conspirator #1 had stolen (and possessed) from GE.

COUNT 1
[Conspiracy to Steal Trade Secrets]

13. Paragraphs One through Twelve are re-alleged and incorporated by reference as if fully set forth herein.

14. From in or about March, 2017, and continuing through at least about January, 2018, in the Northern District of New York, and elsewhere, the defendant, **CHI LUNG WINSMAN NG**, and Co-conspirator #1 did knowingly conspire with each other, and others, with intent to convert a trade secret that was related to a product or service used in and intended for use in interstate and foreign commerce, to the economic benefit of anyone other than GE, the owner of the trade secret, and, intending and knowing that the offense would injure GE, to:

- a. steal and without authorization appropriate, take, carry away, and conceal and by fraud, artifice, and deception obtain such information, in violation of Title 18, United States Code, Section 1832(a)(1);
- b. without authorization copy, duplicate, download, upload, photocopy, replicate, transmit, deliver, send, communicate and convey such information, in violation of Title 18, United States Code, Section 1832(a)(2); and
- c. receive, buy, and possess such information, knowing the same to have been stolen or appropriated, obtained, or converted without authorization, in violation of Title 18, United States Code, Section 1832(a)(3).

Purpose

15. It was a purpose of the conspiracy for **CHI LUNG WINSMAN NG** and Co-conspirator #1 to convert, steal, copy, and possess GE's trade secrets and confidential and proprietary information, including the Research and Engineering Efforts, and use that information to manufacture, and then sell, through the use of a start-up company, competing silicon carbide

MOSFETs to other companies and businesses in China and around the world who were in need of silicon carbide MOSFETs, for their own economic interests and the business interests of their start-up company, and to the detriment of GE.

Manner and Means

16. In furtherance of the conspiracy, **CHI LUNG WINSMAN NG** and Co-conspirator #1 employed the following manner and means, among others:

17. It was part of the conspiracy that Co-conspirator #1 used his position within GE to obtain access to GE's trade secrets and proprietary and confidential information, including the Research and Engineering Efforts involving silicon carbide MOSFETs.

18. It was part of the conspiracy that Co-conspirator #1, after obtaining access to GE's trade secrets and proprietary and confidential information, including the Research and Engineering Efforts involving silicon carbide MOSFETs, transmitted the information outside of GE, for reasons unrelated to GE-business, using various means, including emailing the information to a personal email account, and then downloaded the stolen information from the personal email account onto external media and computers possessed by Co-conspirator #1, so that the information could be used by **NG** and Co-conspirator #1's start-up company.

19. It was part of the conspiracy that **NG** and Co-conspirator #1 used the GE proprietary and confidential information, including the Research and Engineering Efforts involving silicon carbide MOSFETs, that Co-conspirator #1 stole from GE to create and edit business plans and PowerPoint presentations that could be used as a roadmap for their start-up company, and to solicit funding for **NG** and Co-conspirator #1's start-up company, which would in turn allow them to manufacture and sell silicon carbide MOSFETs using the Research and

Engineering Efforts trade secrets that Co-conspirator #1 stole and possessed, for the benefit of their own economic interests and those of their start-up company, and to the detriment of GE.

20. It was part of the conspiracy that **NG** and Co-conspirator #1 presented documents and PowerPoint presentations that contained GE proprietary and confidential information that Conspirator #1 stole from GE, to prospective investors in China – investors who could provide funding for **NG** and Co-conspirator #1's start-up company.

21. It was part of the conspiracy that **NG** and Co-conspirator #1 took steps to avoid detection of their illegal activities by GE.

Overt Acts in Furtherance of the Conspiracy

22. In furtherance of the conspiracy and to accomplish its purpose, **CHI LUNG WINSMAN NG** and Co-conspirator #1 committed and caused others to commit the following overt acts, among others:

23. In about March, 2017, **NG** travelled into the United States and met with Co-conspirator #1 at a restaurant in the Northern District of New York wherein they formed a plan to create a start-up company that would manufacture and sell silicon carbide MOSFETs using the Research and Engineering Efforts trade secrets that Co-conspirator #1 had previously stolen from GE, and that Co-conspirator #1 would, in the future, steal from GE.

24. Between about March, 2017 and about December, 2017, Co-conspirator #1 used his/her access as a research engineer working for NY-PEMC to possess or steal multiple electronic files from GE that contained Research and Engineering Efforts trade secrets involving silicon carbide MOSFETs.

25. Between about March, 2017 and about January, 2018, Co-conspirator #1 possessed, in either personal email accounts, personally owned external media, or personally owned

computers, multiple electronic files that contained Research and Engineering Efforts trade secrets involving silicon carbide MOSFETs that Co-conspirator #1 had stolen from GE.

26. Between about March, 2017 and December, 2017, **NG** and Co-conspirator #1 discussed, drafted, and edited business plans for their start-up company that included the intellectual property possessed by the start-up company, as well as the start-up company's objective, sought after target markets, and amount of financing needed.

27. Between about April, 2017 and December, 2017, **NG** edited a document to be used in efforts to secure funding that professed that **NG** and Co-conspirator #1's start-up company had tangible and intangible assets (such as intellectual property) estimated to be worth no less than \$100,000,000 (USD).

28. On or about June 13, 2017, **NG** sent an email to Co-conspirator #1 that gave their planned start-up company a tentative name and discussed ownership percentages for **NG**, Co-conspirator #1, and others.

29. On or about June 20, 2017, **NG** sent an email to Co-conspirator #1 that contained multi-year financial projections (to include annual cash flows and annual gross profits) for their planned start-up company.

30. Between about March, 2017 and about August, 2017, **NG** and Co-conspirator #1 created and edited documents and PowerPoint presentations that could be presented to prospective investors who could provide funding for **NG** and Co-conspirator #1's start-up company.

31. On or about June 25, 2017, **NG** sent an email to Co-conspirator #1 that contained an attachment that contained one of the PowerPoint presentations to be given to potential investors located in China who could potentially provide funding for **NG** and Co-conspirator #1's start-up company.

32. On or about July 1, 2017, **NG** sent an email to Co-conspirator #1 that contained suggested edits to the PowerPoint presentation referenced in paragraph #31.

33. On or about August 5, 2017, Co-conspirator #1 flew from the United States to China wherein he/she met with **NG** in preparation for a presentation to potential investors located in China from whom **NG** and Co-conspirator #1 were seeking funding for their start-up company.

34. On or about August 7, 2017, **NG**, Co-conspirator #1, and another individual met in Hong Kong with representatives of a Chinese accounting company and incorporated their start-up company in the British Virgin Islands under the name SPS Investment Holdings.

35. On or about August 7 and August 8, 2017, **NG** and Co-conspirator #1 met, in China, with representatives of a Chinese investment company and gave multiple presentations that solicited approximately \$30 million (USD) in funding for **NG** and Co-conspirator #1's start-up company in exchange for a partial ownership stake in **NG** and Co-conspirator #1's start-up company.

36. On or about August 9, 2017, Co-conspirator #1 flew from China back to the United States and began to try and incorporate the Chinese investment company's suggestions into **NG** and Co-conspirator #1's business plan, specifically to shorten **NG** and Co-conspirator #1's start-up company's profitability timeline from five years to three years.

37. Between about August 8, 2017 and about December, 2017, **NG**, Co-conspirator #1, and representatives of the Chinese investment company, attempted to negotiate a Letter of Intent and a Term Sheet that would be used to finalize a deal of \$30 million (USD) funding provided by the Chinese investment company in exchange for an ownership stake in **NG** and Co-conspirator #1's start-up company.

38. Between about April, 2017 and about January, 2018, Co-conspirator #1 and **NG**, in an effort to conceal their illegal activities, used private e-mail accounts as they communicated about, and advanced plans for, **NG** and Co-conspirator #1's start-up company. Some of the private e-mail accounts were beyond the jurisdiction of U.S. legal process.

All in violation of Title 18, United States Code, Section 1832(a)(5).

FORFEITURE ALLEGATION

1. The allegations contained in this Indictment are hereby realleged and incorporated by reference for the purpose of alleging forfeiture pursuant to Title 18, United States Code, Section 1834.

2. Pursuant to Title 18, United States Code, Section 1834, upon conviction of an offense in violation of Title 18, United States Code, Section 1832, the defendants, **CHI LUNG WINSMAN NG** shall forfeit to the United States of America any property, real or personal, involved in such offense, and any property traceable to such property. The property to be forfeited includes, but is not limited to, a money judgment representing proceeds from the offense.

3. If any of the forfeitable property, as a result of any act or omission of the defendants:

(a) cannot be located upon the exercise of due diligence;

(b) has been transferred or sold to, or deposited with, a third party;

(c) has been placed beyond the jurisdiction of the court;

(d) has been substantially diminished in value; or

(e) has been commingled with other property which cannot be divided without difficulty;

the United States of America shall be entitled to forfeiture of substitute property pursuant to Title 21, United States Code, Section 853(p).

All pursuant to Title 18, United States Code, Section 1834.

Dated: February 25, 2021

A TRUE BILL, Name redacted


Grand Jury Foreperson

ELIZABETH C. COOMBE
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Acting under Authority Conferred by
28 U.S.C. § 515

By:


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